

# SEQUENCE LISTING

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<120> GPR54 RECEPTOR AGONIST AND ANTAGONIST USEFUL FOR THE TREATMENT OF  
GONADOTROPIN RELATED DISEASES

<130> 20990EP

<140> 10/552,028

<141> 2005-10-02

<150> PCT/EP04/004132

<151> 2004-04-02

<150> EP 03290831.1

<151> 2003-04-02

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gcc	aac	gcc	tcc	ggc	tgc	ccg	ggc	tgt	ggc	gcc	aac	gcc	tcg	gac	ggc	96
Ala	Asn	Ala	Ser	Gly	Cys	Pro	Gly	Cys	Gly	Ala	Asn	Ala	Ser	Asp	Gly	
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cca	gtc	cct	tcg	ccg	cgg	gcc	gtg	gac	gcc	tgg	ctc	gtg	ccg	ctc	ttc	144
Pro	Val	Pro	Ser	Pro	Arg	Ala	Val	Asp	Ala	Trp	Leu	Val	Pro	Leu	Phe	
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ttc	gcg	gcg	ctg	atg	ctg	ctg	ggc	ctg	gtg	ggg	aac	tcg	ctg	gtc	atc	192
Phe	Ala	Ala	Leu	Met	Leu	Leu	Gly	Leu	Val	Gly	Asn	Ser	Leu	Val	Ile	
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tac	gtc	atc	tgc	cgc	cac	aag	ccg	atg	cgg	acc	gtg	acc	aac	ttc	tac	240
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Tyr 65	Val	Ile	Cys	Arg	His 70	Lys	Pro	Met	Arg	Thr 75	Val	Thr	Asn	Phe	Tyr 80	
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ccc Pro	ttc Phe	acg Thr	gcc Ala 100	ctg Leu	ctg Leu	tac Tyr	ccg Pro	ctg Leu 105	ccc Pro	ggc Gly	tgg Trp	gtg Val	ctg Leu 110	ggc Gly	gac Asp	336
ttc Phe	atg Met	tgc Cys 115	aag Lys	ttc Phe	gtc Val	aac Asn	tac Tyr 120	atc Ile	cag Gln	cag Gln	gtc Val	tgc Ser 125	gtg Val	cag Gln	gcc Ala	384
acg Thr	tgt Cys 130	gcc Ala	act Thr	ctg Leu	acc Thr	gcc Ala 135	atg Met	agt Ser	gtg Val	gac Asp	cgc Arg 140	tgg Trp	tac Tyr	gtg Val	acg Thr	432
gtg Val 145	ttc Phe	ccg Pro	ttg Leu	cgc Arg	gcc Ala 150	ctg Leu	cac His	cgc Arg	cgc Arg	acg Thr 155	ccc Pro	cgc Arg	ctg Leu	gcg Ala	ctg Leu 160	480
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gtg Val	ctc Leu	gcc Ala	ctg Leu 180	cac His	cgc Arg	ctg Leu	tca Ser	ccc Pro 185	ggg Gly	ccg Pro	cgc Arg	gcc Ala	tac Tyr 190	tgc Cys	agt Ser	576
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gcg Ala 225	gcc Ala	atg Met	ctg Leu	cgc Arg	cac His 230	ctg Leu	ggc Gly	cgg Arg	gtc Val	gcc Ala 235	gtg Val	cgc Arg	ccc Pro	gcg Ala	ccc Pro 240	720
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Lys 305	Thr	Trp	Ala	His	Cys 310	Met	Ser	Tyr	Ser	Asn 315	Ser	Ala	Leu	Asn	Pro 320	
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gtc Val	tgc Cys	ccc Pro	tgc Cys 340	gcg Ala	ccg Pro	cgc Arg	cgc Arg	ccc Pro 345	cgc Arg	cgc Arg	ccc Pro	cgc Arg	cgg Arg 350	ccc Pro	gga Gly	1056
ccc Pro	tcg Ser	gac Asp 355	ccc Pro	gca Ala	gcc Ala	cca Pro	cac His 360	gcg Ala	gag Glu	ctg Leu	ctc Leu	cgc Arg 365	ctg Leu	ggg Gly	tcc Ser	1104
cac His	ccg Pro 370	gcc Ala	ccc Pro	gcc Ala	agg Arg	gcg Ala 375	cag Gln	aag Lys	cca Pro	ggg Gly	agc Ser 380	agt Ser	ggg Gly	ctg Leu	gcc Ala	1152
gcg Ala 385	cgc Arg	ggg Gly	ctg Leu	tgc Cys	gtc Val 390	ctg Leu	ggg Gly	gag Glu	gac Asp	aac Asn 395	gcc Ala	cct Pro	ctc Leu	tga		1197

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Ala	Asn	Ala	Ser 20	Gly	Cys	Pro	Gly	Cys 25	Gly	Ala	Asn	Ala	Ser 30	Asp	Gly
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Pro	Val	Pro 35	Ser	Pro	Arg	Ala	Val 40	Asp	Ala	Trp	Leu	Val 45	Pro	Leu	Phe
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Phe 50	Ala	Ala	Leu	Met	Leu	Leu 55	Gly	Leu	Val	Gly	Asn 60	Ser	Leu	Val	Ile
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Tyr 65	Val	Ile	Cys	Arg	His 70	Lys	Pro	Met	Arg	Thr 75	Val	Thr	Asn	Phe	Tyr 80
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Ile	Ala	Asn	Leu	Ala 85	Ala	Thr	Asp	Val	Thr 90	Phe	Leu	Leu	Cys	Cys 95	Val
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Pro	Phe	Thr	Ala 100	Leu	Leu	Tyr	Pro	Leu 105	Pro	Gly	Trp	Val	Leu 110	Gly	Asp
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Phe	Met	Cys	Lys	Phe	Val	Asn	Tyr	Ile	Gln	Gln	Val	Ser	Val	Gln	Ala
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115					120					125					
Thr	Cys	Ala	Thr	Leu	Thr	Ala	Met	Ser	Val	Asp	Arg	Trp	Tyr	Val	Thr
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Val	Phe	Pro	Leu	Arg	Ala	Leu	His	Arg	Arg	Thr	Pro	Arg	Leu	Ala	Leu
145					150					155					160
Ala	Val	Ser	Leu	Ser	Ile	Trp	Val	Gly	Ser	Ala	Ala	Val	Ser	Ala	Pro
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Val	Leu	Ala	Leu	His	Arg	Leu	Ser	Pro	Gly	Pro	Arg	Ala	Tyr	Cys	Ser
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Glu	Ala	Phe	Pro	Ser	Arg	Ala	Leu	Glu	Arg	Ala	Phe	Ala	Leu	Tyr	Asn
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Leu	Leu	Ala	Leu	Tyr	Leu	Leu	Pro	Leu	Leu	Ala	Thr	Cys	Ala	Cys	Tyr
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225					230					235					240
Ala	Asp	Ser	Ala	Leu	Gln	Gly	Gln	Val	Leu	Ala	Glu	Arg	Ala	Gly	Ala
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Val	Arg	Ala	Lys	Val	Ser	Arg	Leu	Val	Ala	Ala	Val	Val	Leu	Leu	Phe
			260					265					270		
Ala	Ala	Cys	Trp	Gly	Pro	Ile	Gln	Leu	Phe	Leu	Val	Leu	Gln	Ala	Leu
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Gly	Pro	Ala	Gly	Ser	Trp	His	Pro	Arg	Ser	Tyr	Ala	Ala	Tyr	Ala	Leu
	290					295					300				
Lys	Thr	Trp	Ala	His	Cys	Met	Ser	Tyr	Ser	Asn	Ser	Ala	Leu	Asn	Pro
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Leu	Leu	Tyr	Ala	Phe	Leu	Gly	Ser	His	Phe	Arg	Gln	Ala	Phe	Arg	Arg
				325					330					335	
Val	Cys	Pro	Cys	Ala	Pro	Arg	Arg	Pro	Arg	Arg	Pro	Arg	Arg	Pro	Gly
			340					345					350		
Pro	Ser	Asp	Pro	Ala	Ala	Pro	His	Ala	Glu	Leu	Leu	Arg	Leu	Gly	Ser

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 His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala  
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 Pro Val Pro Ser Pro Arg Ala Val Asp Ala Trp Leu Val Pro Leu Phe  
       35                      40                      45  
 Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile  
       50                      55                      60  
 Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr  
       65                      70                      75                      80  
 Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val  
       85                      90                      95  
 Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp  
       100                      105                      110  
 Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala  
       115                      120                      125  
 Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr  
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 Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu  
       145                      150                      155                      160  
 Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro  
       165                      170                      175

Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser  
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 Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn  
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 Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr  
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 Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro  
 225 230 235 240  
 Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala  
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 Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe  
 260 265 270  
 Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu  
 275 280 285  
 Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu  
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 Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro  
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 325 330 335  
 Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly  
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 Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu His Arg Leu Gly Ser  
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 Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu  
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